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September 23, 1998

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FEDERAL COMMUNICATIONS COMMISSION
OFFICE OF THE SECRETARY

VIA HAND DELIVERY

Ms. Magalie Roman Salas
Secretary
Federal Communications Commission
1919 M Street, N.W.
Room 222
Washington, DC 20554

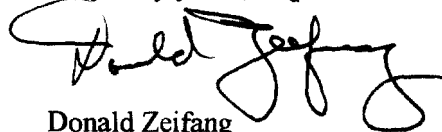
Re: ET Docket No. 98-80

Dear Ms. Salas:

On behalf of General Electric Company, we transmit herewith an original and nine copies of Reply Comments in the above-referenced proceeding.

Should there be any questions, please contact the undersigned.

Very truly yours,


Donald Zeifang

Enclosure

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SEP 23 1998

Before the
Federal Communications Commission
Washington, D.C. 20554

FEDERAL COMMUNICATIONS COMMISSION
OFFICE OF THE SECRETARY

In the Matter of

1998 Biennial Regulatory Review –
Conducted Emissions Limits Below 30 MHz
For Equipment Regulated Under Parts 15
And 18 of the Commission's Rules

ET Docket No. 98-80

REPLY COMMENTS OF GENERAL ELECTRIC COMPANY

General Electric Company ("GE"), through counsel, hereby files its Reply Comments in this proceeding. On July 22, 1998, GE filed its original Comments in this proceeding, which is a broad inquiry raising several long-range issues. At the same time, GE stressed the importance of, and need for, prompt action in a separate rule-making proceeding in ET Docket 98-42 (FCC 98-53, adopted April 1, 1998), which proposes to relax, in frequencies between 2.2 and 3.0 MHz, conducted limits for RF lighting devices. This proposed change would codify the limits permitted by a waiver granted to GE in 1995, which GE has demonstrated should be ordered now.

None of the Comments filed in response to the instant Notice of Inquiry in ET Docket No. 98-80 provides any basis for further delay of action in ET Docket No. 98-42. Even the National Association of Broadcasters, whose principal concern is interference in the AM band, has failed to provide any basis for further delay in relaxation of limits in the 2.2-3.0 MHz band.

For reasons previously stated in our Comments in this proceeding (pp. 5-6), there is a continuing need for separate standards for commercial and non-commercial devices, a two-tiered system that has worked well in the past and which affords the opportunity for more flexible regulation of devices that are intended and marketed for specific environments.

We agree with the general proposition that some limits on conducted emissions are still necessary and that, whatever the limits may be, they should be observed for covered devices. However, we do not agree that all devices should be forced to comply with emission limits absent compelling evidence that current systems cause serious interference problems or that widespread complaints have been received. To impose new burdens and costs upon both manufacturers and consumers, without compelling evidence of need, is both unwarranted and unwise.

The Comments of the National Association of Broadcasters require specific rebuttal. In essence, NAB has asked for a rollback of limits. This is a familiar tactic that is frequently employed as a means to achieve a desired end of making the status quo appear to be a reasonable compromise. We trust that the Commission will be mindful of the heavy burden, which NAB has not met, required of a party seeking to reverse the clearly preferable policy of the Commission to remove unneeded and costly regulations.

THE "CARL T. JONES STUDY"

Rather than provide evidence of actual interference from Part 18 devices, such as RF lighting devices, NAB has created evidence, in an artificial laboratory environment, of simulated interference that produces the obvious worst case results.

In light of the many millions of RF lighting devices in the field since the early 1980's, and their excellent history of non-interference (see Petition for Waiver in ET Docket No. 98-42, pp.16-19), NAB's proposal to make conducted limits more stringent is not justified. NAB's proposed 22 dB tightening of conducted limits for Part 15 and Part 18 devices, including RF devices, would inflict needless hardship on the industries that manufacture such devices and would require them to pass through increased costs of compliance to their customers. As a result, the acceptance of such products would be deterred and their benefits would not be realized by the public.

The so-called "Carl T. Jones Study", commissioned by NAB, seeks to provide a technical basis to support the argument that current conducted limits absolutely fail to protect today's AM radio services. But even the NAB summary (p. 3) concedes that existing conducted limits adequately protect AM radio unless the desired signal and interfering signal are coincident in frequency. When that occurs, NAB uses the study to claim that a conducted limit of 20 microvolts is necessary "to adequately protect the AM receiver." However, the tests conducted for the study fail to adequately simulate realistic consumer or non-consumer environments.

In the study, a simulated interference signal was injected directly into the power cord of the subject AM radio. This approach fails to technically account for a real world environment where the impedances of RF lighting devices that are presented to the AC power line interact in a beneficial manner with other power line impedances to reduce potential interference. The test represents a very worst case scenario, and one not typically encountered in the field. Most RF lighting devices would not be in such close proximity to an AM radio. Distance greatly mitigates any potential interaction. Further, other mitigation effects occur in installations due to the type of wiring practices employed. Commercial installations use metallic conduit, which

shields re-radiation that may otherwise be emitted from the power line. The impedances and stray capacitances provided by such wiring practices will also reduce the level of conducted emissions that might otherwise be found at the AM radio.

None of these mitigating factors was considered in the NAB model. NAB's use of a current-fed source to generate a voltage where the equipment is extremely close to the AM radio establishes an unrealistically harsh representation of field conditions.

The NAB test should be more accurately described as a type of AM radio immunity test which indicates, by its test results, that the susceptibility of typical AM radios to harshly simulated interference signals could be significantly improved, especially for in-band interference rejection. The test does not accurately simulate the environment for potential interaction with RF lighting devices and AM radios, and has overlooked many practical yet very important factors that are present in the field.

REGULATION OF ALL PRODUCTS NOT NECESSARY

NAB suggests that ordinary household appliances should be forced to comply with Part 15 and 18 emission limits. NAB fails to provide either compelling evidence that current systems cause serious interference to AM radios or histories of complaints from consumers. Such compelling evidence must be forthcoming before adding a new product type to Commission regulation. The facts do not warrant further consideration of this proposal.

CARRIER CURRENT TRANSMISSIONS SHOULD NOT BE OVERREGULATED

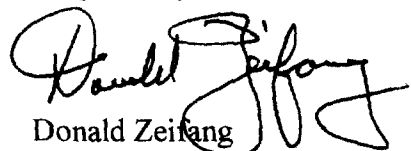
Carrier current communication is used for many applications today, not only as an alternate means to provide signals to AM receivers. Carrier current or "powerline carrier"

control systems are becoming more common and offer the advantages of communication over existing wiring systems and infrastructure. There are many types of carrier current systems. Some employ signal processing schemes (such as FSK or spread spectrum approaches) that are even less likely to interfere with any AM radio programming. NAB's proposal for carrier current requirements would virtually prohibit such applications for anything except AM radio use. A single 20uV level in the AM band is unreasonable and overly simplistic in approach. Such a restriction is not necessary, absent compelling evidence to the contrary.

CONCLUSION

The Commission should act now in Docket 98-42. Nothing presented in response to the Notice of Inquiry in this proceeding justifies further delay. The Commission should not rollback existing limits but rather should relax overly restrictive limits. The Commission should continue to maintain the distinction between consumer and non-consumer emission limits. All limits for covered products should be observed but, absent compelling evidence of need, should not be applied to additional products.

Respectfully submitted,

A handwritten signature in black ink, appearing to read "Donald Zeifang", written over a horizontal line.

Donald Zeifang
Counsel to General Electric Company

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